equilibrium of the body is performed, with all probability, by means of the semicircular canals.—*Pflüger's Archiv*, Band 30, 7 and 8 Heft.

FUNCTION OF THE CEREBELLUM.—Prof. Schiff has a communication of a provisional nature on this subject. It is known that ablation of the most superficial layer of the cerebellum, in its whole length and breadth, or the vermis alone, causes no symptoms. This holds good not only for the gray substance, but also for the white to about the level of the second bifurcation of its fibres. If a cut is made into the portion lying between the entrance of the cerebellar peduncles of the two sides and two thirds of the thickness of cerebellum is sliced off layer by layer, then irregularities of movement ensue, which rapidly increase with the depth and extent of the wound ; and when the ablation approaches the middle of the cerebellum, then ensue the movements which have been designated since Flourens as want of coördination. These disturbances of movement can ensue when an extended injury is made of one or both hemispheres without implication of the vermis, or after a lesion of the latter alone, or of a hemisphere and the vermis together. In all these instances the motor disturbances are not lasting, lessening in the course of one to two days. These motor disturbances are symptoms of the spread of traumatic irritation.

Rolling movements ensue when the middle cerebellar peduncle is injured, and the direction of the turning is toward the least injured side. If the injury reaches in the interpeduncular space to the under third of the cerebellum, or the fourth ventricle is bared, then movements of incoördination ensue, but the important point is that they remain an indefinite time. By more extended loss of substance in the under third of the cerebellum, the disturbances are greater and more extensive than by smaller losses. It is not correct to infer that the intensity and length of time of an injury of the cerebellum depend mainly upon the extent of the wound, or upon the volume of the disorganized cerebellar mass.—*Pflüger's Archiv*, Band 32, Heft 7 and 8.

MOVEMENTS OF THE UTERUS.—Prof. Kronecker and Herr Frommel have made experiments upon this point, using the graphic method, which heretofore has not been employed. Previous observers watched the effects upon the bared organ, not discounting the injurious effect of evaporation and cooling of the uterus. Thus Frommel arranged his experiments as follows : in the vagina of a rabbit a perfusion-cannula, with a funnel-shaped end was so bound in that one of the cornua was connected with the funnel. In the upper end of this cornu of the uterus a simple glass cannula was fastened. The other one of the cornua of the uterus was ligated near the os uteri, since a want of synchrony between movements of the cornua complicates the curve. Through the glass

cannula a six-tenth per-cent. salt solution, of temperature 38°, was conducted, and after closure of the upper cannula, one of the cornua was under a tension of about ten cm. of water. The inlet end of the perfusion-cannula was clamped and attached to Grünmach-Marey polygraph, whose lever denoted on the kymographion the changes of the cornua. The spontaneous movements were excluded by a section above the respiratory centre, excluding the large and middle brain. The animal breathed well and regularly for many hours. When the uterus was carefully replaced in the abdominal cavity and the temperature and circulation kept as nearly normal as possible, then wave lines appeared on the kymographion, marked as those seen in movements of the diaphragm. The movements are spontaneous and rhythmic like those seen with excised heart of a frog. Their conclusions were as follow: 1. The uterus possesses in all stages of its development in mature rabbits the ability to cause rhythmic contractions. 2. When the temperature sinks (29° C. in rectum) gradually the contractions become more seldom, but their energy does not decrease; if the normal temperature of the animal is increased (38°), then the contractions become more frequent, by 39° considerably smaller, and by 40° irregular, and by 43° they are completely lost. 3. Disturbances of the circulation influence the movements of the uterus; compression of the aorta in a short time stops them. 4. The movements of the uterus are not connected with a centre lying outside of them, for they remain after complete isolation.—*DuBois Archiv*, 1883, 2 and 3 Heft.

IRRADIATION OF THE CENTRE OF DEGLUTITION.—Dr. S. Meltzer has studied this subject. Irradiation is a general property of nervous functions. Thus when the skin of the posterior extremities is pinched, with the movement of the posterior extremities are associated movements of the anterior. In three centres of the medulla oblongata, those of respiration, cardiac inhibition, and vasomotorial, there is associated excitation. In this manner Hering explains Traube's curves in the blood-pressure curve as a result of associated excitation of the vaso-motor centre by the rhythmic activity of the respiratory centre. The mechanism of deglutition is one of the most precise and the best-controlled reflex in the whole animal organism. Neither removal of the brain nor narcosis exert any influence upon the setting in action of the act of deglutition. The beginning of the act of deglutition is connected with the will only, in that we voluntarily are in position to raise the mylo-hyoid muscle, and thereby press the root of the tongue against the roof of the mouth, whereby an act of deglutition is excited. The centre of deglutition is in the medulla oblongata, but Herr M. observed in dogs that after removal of the medulla oblongata at the level of the nib of the calamus scriptorius, and after the setting up of artificial respiration, the calling-out of the movement of deglutition did